

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims, in the application:

Listing of Claims:

1. – 3. (cancelled)

4. (withdrawn) The burner as claimed in claim 1, wherein a flame arc forming head is provided at the end of the tubular body opposite to the truncated end.

5. (withdrawn) The burner as claimed in claim 4, wherein each of the first and second half shells have ends that are opposite to the truncated ends and that are integral parts with respectively the first and second half shells, and wherein a flame arc forming head is formed when the first and second half shells are joined.

6. – 8. (cancelled)

9. (withdrawn) The burner as claimed in claim 1, further comprising a venturi tube connected to the burner and supplying an air and gas mixture to the burner, the venturi tube being situated in an offset position with respect to the longitudinal axis of the burner.

10. (withdrawn) The burner as claimed in claim 9, wherein an opening is provided on the outer face of one of the two half shells, the opening being situated at the end of the burner corresponding to the flame arc forming head, the venturi tube being sealed to the opening and providing a supply of gas and air, the venturi tube further having a median longitudinal axis in a transverse position with respect to the median longitudinal axis of the tubular body.

11. (withdrawn) A burner as claimed in claim 9, wherein the median longitudinal axis of the venturi tube is substantially parallel to the median longitudinal axis of the tubular body.

12. – 21. (cancelled)

22. (withdrawn) The burner as claimed in claim 18, wherein the end crest of at least one of the inner faces of the grooves has a corrugated shape generating widened portions of the recess.

23. (withdrawn) The burner as claimed in claim 22, wherein the inner faces of both grooves are shaped with a corrugated end crest, the corrugated crests being symmetric to each other with respect to the separator plane between the inner faces of the two grooves.

24. (withdrawn) The burner as claimed in claim 23, wherein the tips of facing corrugated crests are offset from each other.

25. (withdrawn) The burner as claimed in claim 23, wherein facing corrugated crests –have tips in contact with each other.

26. (withdrawn) The burner as claimed in claim 23, wherein the transverse passage channels generated by the corrugated profiles of the crests have an inclined orientation with respect to a direction perpendicular to the axis of the burner.

27. (withdrawn) The burner as claimed in claim 26, wherein the transverse passage channels are parallel to each other.

28. (withdrawn) The burner as claimed in claim 26, wherein at least a group of the transverse passage channels are equally spaced.

29. (withdrawn) The burner as claimed in claim 26, wherein the transverse passage channels are oriented in a direction diverging from the inner area of the burner to the sides of the burner.

30. (withdrawn) The burner as claimed in claim 26, wherein the transverse passage channels are oriented and arranged symmetrically with respect to a median longitudinal plane that is perpendicular to the axis of the transverse passage channels.

31. (withdrawn) The burner as claimed in one claim 1, wherein the longitudinal intermediate portion of the burner has a cylindrical shape, in at least one of the half shells, the cylindrical shape having an axis substantially parallel to the burner axis.

32. (withdrawn) The burner as claimed in claim 31, wherein the longitudinal intermediate portion has a cylindrical shape in each of the half shells.

33. (withdrawn) The burner as claimed in claim 32, wherein the cylindrical shapes are symmetrical in relation to each other.

34. (withdrawn) The burner as claimed in claim 31, wherein the extends from the venturi tube to a predetermined distance from the opposite end of the burner, the two half shells being substantially flat in the proximity of the opposite end of the burner.

35. – 43. (cancelled)

44. (currently amended) The burner as claimed in claim 1, further comprising a separate closing member at the truncated end of the tubular body.

45. (currently amended) The burner as claimed in claim 44, wherein the separate closing member is the flame arc forming head of the burner.

46. (currently amended) The burner as claimed in claim 45, wherein the two half shells are extended at the end opposite to the truncated end to form a venturi tube aligned with the burner.

47. (currently amended) The burner as claimed in claim 46, wherein the venturi tube comprises a pair of additional half shells defining the venturi tube when joined together.

48. (currently amended) The burner as claimed in claim 46, wherein the venturi tube has a longitudinal axis having a direction relative to the longitudinal axis of the burner body, and wherein the direction is parallel or transverse.

49. (currently amended) The burner as claimed in claim 46, wherein the truncated end of one half shell extends beyond the other half shell and has an extension defining a base that enables fastening of the burner to an oven wall.

50. (currently amended) The burner as claimed in claim 49, further comprising a closing flame arc forming head having the shape of a half shell, the closing flame arc forming head being force fit inside the tubular body of the burner up to abutment of the end edge of the shorter half shell against an end-of-stroke abutment on the outer surface of the flame arc forming head, wherein the flame arc forming head rests, in the inserted position, on the extension of the longer half shell.

51. (currently amended) The burner as claimed in claim 50, further comprising means for locking the flame arc forming head in the inserted condition.

52. (currently amended) The burner as claimed in claim 51, wherein the means for locking comprise one or more bushings that are provided on the flame arc forming head in the proximity of the corresponding end of the shorter half shell and that each contains an axial slot.

53. (currently amended) The burner as claimed in claim 52, wherein the flame arc forming head has the shape of a half shell and the slots in the bushings are positioned in a direction perpendicular to the longer half shell, the bushings being of such a dimension that the slots at the ends of the bushings are in contact with the inner surface of the half shells and are engaged with corresponding inner bosses provided inside the one or more half shell.

54. (currently amended) The burner as claimed in claim 50, wherein the extension of the longer half shell has at least one pair of apertures which form a pair of tabs to be bent and compressed above an outer peripheral flange of the flame arc forming head, in order to secure it to a surface preventing removal.

55. (cancelled)

56. (withdrawn) The burner claim 1,

wherein the burner has a squared shape,

wherein the burner has a transverse end channel delimited on one side by a transverse wall seamlessly connected to an ignition tube and on the other side by a plate-shaped part oriented parallel to the burner faces, and having one or more through holes for supplying gas in the transverse channel, the holes extending from the end edge of the plate-shaped part, in a position opposite to the transverse channel, to the transverse channel itself, and opening into the transverse channel.

57. (withdrawn) The burner as claimed in claim 56, wherein the burner end associated to the flame arc forming head is shaped to form a slot for insertion of the plate-shaped part, the slot having a size substantially corresponding to a section of the plate-shaped part.

58. (withdrawn) The burner as claimed in claim 56, wherein the flame arc forming head has side flanks that protrude on the same side of the plate-shaped part as the transverse end wall, and wherein the burner end fastened to the flame arc forming head has side recesses for insertion of the side flanks of the flame arc forming head.

59. (withdrawn) The burner as claimed claim 56, wherein, at the edge that delimits the transverse channel, the plate-shaped part has one or more tabs overlapping the end edge of the associated part of the burner wall, and wherein the one or more tabs form a pocket for receiving said edge of the burner wall and an end-of-stroke abutment of the flame arc forming head when inserted in the corresponding burner end.

60. (withdrawn) The burner as claimed in the preceding claims 56, wherein on one surface the plate-shaped part has a central continuous groove opening into the transverse groove of the flame arc forming head, and wherein, in the mounted condition, the central continuous groove forms another channel with the corresponding burner wall for supplying gas to the ignition tube, the central continuous groove being closer to the end of the ignition tube than the through holes for supplying gas to the transverse channel of the flame arc forming head.

61. (withdrawn) The burner as claimed in claim 56, further comprising side flanks each having a longitudinal groove in a median area of their extension, the longitudinal groove starting at the end of the side flank opposite to the transverse end channel, and ending at a predetermined distance from the end of the side flank abutted to the transverse channel.

62. (withdrawn) The burner as claimed in claim 61, wherein the transverse wall, the ignition tube and the flanks surrounding the plate-shaped part only project on one side of the plate-shaped part, which side is designed to be coupled to the shorter side of the burner end, whereas the opposite side of the plate-shaped part is completely flat and rests on the longer side of the burner end forming a fastening base.

63. (withdrawn) The burner as claimed in claim 56, wherein the plate-shaped part has at least two through holes having axes perpendicular to the surface defined by said part and which open into a transverse recess, and wherein the burner end wall surfaces overlapping the sides of the plate-shaped part of the flame arc forming head have complementary and coincident ridges.

64. (withdrawn) The burner as claimed in claim 63, wherein one or more walls of the burner end that overlap the faces of the plate-shaped part have positioning ribs to delimit a surface which substantially corresponds to the surface covered by the plate-shaped part in relation to its mounted condition.

65. (withdrawn) The burner as claimed in claim 56, further comprising a venturi tube, wherein the outer face of each of the two half shells forms the burner body and the venturi tube and has, at each side edge, a longitudinal groove, defining a pair of inner longitudinal recesses designed to convey and evenly distribute the gas/air mixture, the recesses starting from the venturi tube area and ending at a predetermined distance from the flame arc forming head carrying end.

66. (withdrawn) The burner as claimed in claim 65, wherein the two longitudinal recesses of one half shell are aligned with the two longitudinal recesses of the opposite half shell.

67. (withdrawn) The burner as claimed in claim 65, wherein each longitudinal recess has a depth causing it to be at least in partial contact with the corresponding recess of the opposite half shell in the venturi tube and wherein, in the burner section, the two longitudinal recesses of at least one of the two half shells have a depth causing their crests to run at a predetermined distance from the crests of the corresponding recesses of the opposite half shell, so as to form a pair of lateral longitudinal slots for conveying the gas/air mixture in a direction transverse to the flow direction.

68. (withdrawn) The burner as claimed in claim 67, wherein the longitudinal recesses in mutual contact in the funnel-like end section of the venturi tube are situated at least partly inside the burner body and, and wherein the longitudinal recesses separate, from said end section of the venturi tube, side compartments extending the burner body toward the venturi tube, the side compartments having walls with supply holes providing flow communication with the inside of the burner body.

69. (withdrawn) The burner as claimed claim 56, wherein the end of the tubular body opposite to the flame arc fanning head has a truncated profile, and wherein the venturi tube is provided as a separate body, which is fitted on said end.

70. (withdrawn) The burner as claimed in claim 69, wherein the venturi tube is inserted in the burner up to abutment of the end edge of said truncated end against an end-of-stroke step formed on the outer surface of the venturi tube.

71. (withdrawn) The burner as claimed in claim 69, further comprising means for locking the venturi tube in the inserted condition.

72. (withdrawn) The burner as claimed in claim 71, wherein the means for locking comprise at least one inner ridge, provided in the proximity of the end of each half shell, and engaged in a pair of corresponding slots provided on each facing surface of the part of the venturi tube that is situated inside the tubular burner body.

73. (withdrawn) The burner as claimed in claim 69, wherein the venturi tube is connected to the tubular burner body through an interposed tubular joint.

74. (withdrawn) The burner as claimed in claim 73, wherein the tubular joint is rectilinear so that, in the assembled condition, the venturi tube extends substantially coaxially to the tubular burner body.

75. (withdrawn) The burner as claimed in claim 73, wherein the tubular joint has a curved shape so that, in the assembled condition, the venturi tube extends transverse to the tubular burner body.

76. (withdrawn) The burner as claimed in claim 69, further comprising means for coupling the burner to a mounting for supporting in a predetermined position a flame detector thermocouple and a burner igniter.

77. (withdrawn) The burner as claimed in claim 76, wherein the means for coupling cause the mutual contact surfaces of the burner and the mounting to be oriented in at least three non-parallel planes, and to have rotation preventing means that define the position of the mounting accurately and uniquely.

78. (withdrawn) The burner as claimed in claim 69, wherein the burner end with the flame arc forming head is provided by shaping the truncated ends of two half shells of the burner.

79. (withdrawn) The burner as claimed in claim 78, wherein the two half shells form a flattened end ending with two perpendicular spaced end tabs, at whose interstice at least one gas inflow groove is formed by shaping the flattened portion of at least one of the half shells, and wherein one of the half shells forms perpendicular side tabs oriented toward the other half shell, the latter forming sealing folds at least over a portion of the perpendicular tabs.

80. (withdrawn) The burner as claimed in claim 79, wherein the flattened portions of the two half shells have, in coincident positions, at least one riveting bushing and a hole for the insertion of the bushing.

81. (withdrawn) The burner as claimed in claim 80, further comprising a fastening base, which is a separate part, the fastening base being provided with a plate-shaped fastening extension having a pair of riveting tabs designed to engage in holes in the flattened portion of the burner that comprises the flame arc forming head, the fastening base further having a hole wherein a riveting bushing extending from the burner's flattened portion is engaged.

82. (withdrawn) The burner as claimed in claim 81, further comprising an ignition tube having a fastening plate connected to the plate-shaped fastening extension of the base and carrying apertures for the passage of side riveting tabs from the plate-shaped fastening extension of the base.

83. (withdrawn) The burner as claimed in claim 82, further comprising opposite side flanges over at least one portion of its length, the ignition tube having a transverse fastening plate of a length corresponding to the length of the burner with the side flanges, there being provided, at opposite ends of the fastening plate, at least two riveting tabs around the side flanges.

84. (withdrawn) The burner as claimed in claim 82, further comprising opposite side flanges over at least one portion of its length, there being provided a mounting for supporting a flame detector and an ignition electrode, the mounting having a transverse fastening plate of a length corresponding to the length of the burner with the side flanges, there being provided, at opposite ends of the fastening plate, at least two riveting tabs around the side flanges.

85. (withdrawn) The burner as claimed in claim 84, wherein the tabs form, a C-shaped engagement groove for the corresponding side flange at least at one end of the plate, and wherein the tabs at the opposite end provide lateral containment, there being provided removable means forming a wedge-like locking engagement of the cooperating side flange of the burner.

86. (withdrawn) The burner as claimed in claim 85, wherein the removable means comprise an inclined extension projecting beyond the corresponding side flange of the burner and having a locking screw in a threaded hole.

87. (withdrawn) A venturi tube for a burner, comprising:
a tubular body having at least one funnel-shaped section that tapers toward a gas/air mixture supplying nozzle, the funnel-shaped section having, in a substantially intermediate portion, at least an aperture for the intake of the primary combustion air; and
a tubular sleeve that can slide in the direction of the axis of the venturi tube between a position in which the intake aperture is substantially completely closed and a position in which it is substantially completely open, thereby adjusting the stoichiometric gas/air ratio of the gaseous mixture reaching the burner, the sleeve being provided with position locking means, wherein the venturi tube is composed of two half shells.

88. (withdrawn) The venturi tube as claimed in claim 87, wherein, when the burner is fitted onto a wall of the oven, the separator plane between the two half shells is substantially parallel to the wall of the oven.

89. (withdrawn) The venturi tube as claimed in claim 87, wherein the venturi tube has a construction symmetrical, at least in the tapering section, to the junction plane between the two half shells and to the means for locking the gas/air stoichiometric ratio adjustment sleeve, and wherein the locking means, when the burner is fitted on a wall of the oven, are always situated on the accessible side.

90. (withdrawn) The venturi tube as claimed in claim 87, wherein the venturi tube extends coaxially to the tubular burner body.

91. (withdrawn) The venturi tube as claimed in claim 87, wherein the venturi tube is disposed in a transverse position with respect to the tubular burner body.

92. (withdrawn) The venturi tube as claimed in claim 87, wherein the venturi tube is integrated with the burner, wherein each of the two half shells comprises an extension, the extensions forming the tubular burner body.

93. (withdrawn) The venturi tube as claimed in claim 87, further comprising means for coupling the venturi tube to a mounting for supporting in a predetermined position a flame detector thermocouple and a burner igniter.

94. (withdrawn) The venturi tube as claimed in claim 93, wherein the means for coupling cause a mutual contact of the surfaces of the venturi tube and of the mounting along at least three non-parallel planes, further comprising rotation preventing means defining the position of the mounting accurately and uniquely.

95. (withdrawn) The venturi tube as claimed in claim 93, wherein the venturi tube is a separate part having ends tightly fitted to an end of the tubular burner body.

96. (withdrawn) The venturi tube as claimed in claim 95, wherein the means for coupling comprise an end section of a size insertable inside an end of the tubular burner body up to end-of-stroke abutment of the end edge of the burner and against a step that is formed on the outer surface of the venturi tube.

97. (withdrawn) The venturi tube as claimed in claim 96, further comprising means for locking the venturi tube in an inserted position inside the tubular burner body.

98. (withdrawn) The venturi tube as claimed in claim 97 wherein the means for locking comprise one or more inner ridges that are provided in the proximity of the end of at least one of the half shells defining the burner, and that are engaged in one or more corresponding slots provided on the surface of that part of the venturi tube that is situated inside the burner.

99. (withdrawn) The venturi tube as claimed in claim 98, further comprising a member for joining the venturi tube to the body of the tubular burner body.

100. (withdrawn) The venturi tube as claimed in claim 99, wherein the member is a tubular joint.

101. (withdrawn) The venturi tube as claimed in claim 98, further comprising a chamber with an opening, the chamber being situated at one end of the venturi tube and being connected to a union with an end of the burner.

102. (withdrawn) The venturi tube as claimed in claim 101, wherein the union extends perpendicularly to the junction planes between the half shells of the venturi tube and the half shells of the burner body, the junction planes being parallel to each other.

103. (withdrawn) The venturi tube as claimed in claim 102, wherein the chamber is sealed to the burner by a mechanical process.

104. (withdrawn) A mounting for supporting in a predetermined position a flame detector thermocouple and an igniter for a burner, the mounting comprising:

first means for coupling the mounting to the burner, wherein the first means have contact surfaces with the burner along at least three non-parallel planes, and

second means for preventing mounting rotation, defining accurately the position thereof.

105. (withdrawn) The mounting as claimed in claim 104, further comprising third means for coupling the mounting to a thermocouple and an igniter, the third means providing predefined positions of the thermocouple and of the igniter with respect to the mounting and, when the mounting is fitted on the burner, with respect to the gas/air mixture outlet holes.

106. (withdrawn) The mounting as claimed in claim 104, wherein the mounting is profiled at one end as a U-shaped arm, on a side wall whereof one or more holes being provided, each hole being coaxial to a corresponding hole formed on the opposite wall, each pair of coaxial holes being designed for axial introduction of the igniter and the thermocouple.

107. (withdrawn) The mounting as claimed in claim 106, further comprising fourth means for locking the thermocouple and the igniter in an inserted position inside the respective pairs of holes.

108. (withdrawn) The mounting as claimed in claim 107, wherein the fourth means comprise at least one detachable member for locking the thermocouple and the igniter into position.

109. (withdrawn) The mounting as claimed claim 106, wherein the U-shaped arm has an extension for connecting the U-shaped arm to the burner body.

110. (withdrawn) The mounting as claimed in claim 109,
wherein the burner comprises a parabolic reflector;
wherein the extension is an end extension of the base side of the U-shaped arm, the end extension comprising a plate-shaped member having a perforated end;
wherein the parabolic reflector is connected to the burner by one or more centering and fastening bolts;
wherein the perforated end enables the passage of one or more centering and fastening bolt in one or more fastening holes in the proximity of the end of the burner body associated to the venturi tube; and
wherein the plate is clamped above and against the parabolic reflector at the same time as the parabolic reflector is clamped against the outer face of the half shell of the burner body that carries the one or more fastening bolts.

111. (withdrawn) The mounting as claimed in claim 110, wherein the end with the one or more fastening holes extends transversely by a tab oriented in the direction of the burner to form a bridge-like end, which overlaps, through a pair of apertures formed in the parabolic reflector, two longitudinal grooves on the outer face of the burner half shell that carries the bolts, preventing rotation of the mounting.

112. (withdrawn) The mounting as claimed claim 106, wherein the mounting comprises a first section oriented opposite the gas/air mixture inflow direction, a second curved section, and a third section oriented in the gas/air mixture inflow direction.

113. (withdrawn) The mounting as claimed in claim 106, wherein the extension connected to the burner comprises a plate extending one side of the U-shaped arm to acquire a "C" shape having a first U- bent edge for connecting to an outer tab of the venturi tube, and

having a second U-bent edge shaped to define one or more "C" shaped teeth to be fitted into corresponding holes formed in the venturi tube.

114. (withdrawn) The mounting as claimed in claim 113 wherein the plate has, in a substantially intermediate position between the U-bent edges, a step that causes an elastic deformation of the cooperating outer tab of the venturi tube and that further retains the mounting in position.

115. (withdrawn) The mounting as claimed in claim 113, wherein the U- shaped arm is fitted on the burner body at an angle of about 45° with the direction of the gas/air mixture inflow.

116. (withdrawn) A mounting for supporting at least an electrode in a burner assembly, wherein the mounting comprises a transverse fastening plate of a length corresponding to the total width of the burner inclusive of a side flange provided on both sides of the burner over at least a predetermined partial length thereof, and wherein the fastening plate comprises means for fastening to each of the two side flanges of the burner.

117. (withdrawn) A process for fabricating a burner comprising an upper half shell, a lower half shell, a venturi tube for supplying a gas/air mixture to the burner, and a parabolic reflector, wherein the upper and lower half shell each have a free end and a truncated end, and wherein the longitudinal axis of the venturi tube does not coincide with the longitudinal axis of the burner, the process comprising the steps of:

- forming the upper and a lower half shells by cutting a metal sheet and by bending, drawing and trimming its edges;

- making a hole at an end of a face of the lower half a shell;

- fitting the lower half shell onto the venturi tube, by inserting an end of the venturi tube in the hole and by pressing the end of the venturi tube around the edge of the hole;

- forming gas/air mixture outlet holes on the two half shells;

- crimping the two half shells to form the burner body while forming the pilot burner;

- welding parabolic reflector fastening bolts on the upper half shell;

- closing an end of the burner body by pressing together the truncated ends of the two half shells, the truncated ends creating a flattened end;

deforming the flattened end to create a burner fastening base;
positioning the parabolic reflector on the upper half shell;
positioning a mounting for an igniter and a thermocouple on the upper half shell; and
securing the parabolic reflector and the mounting.

118. (withdrawn) The process as claimed in claim 117, further comprising the step of forming an aperture on the surface of the parabolic reflector, and downwardly bending the edge of said aperture to form an ignition tube.

119. (withdrawn) A process for fabricating a burner comprising an upper half shell, a lower half shell, a venturi tube for supplying a gas/air mixture to the burner, and a parabolic reflector, wherein the upper and lower half shell each have a free end and a truncated end, and wherein the longitudinal axis of the venturi tube does not coincide with the longitudinal axis of the burner, the process comprising the steps of:

making an upper half shell having an integrated half shell at one of its ends to form a half part of the venturi tube, and a lower half shell having an integrated half shell at one of its ends to form the other half part of the venturi tube, by cutting a metal sheet and bending, drawing and trimming its edges;

crimping the two half shells to form the burner body while forming the pilot burner and the venturi tube;

creating a truncated end of the burner body and tightly locking a flame arc forming head member at the truncated end by clutching and mechanical compression deformation, the truncated end having an extension;

forming gas/air mixture outlet holes on the two half shells;
welding parabolic reflector fastening bolts on the upper half shell;
deforming the extension of the truncated end to create a burner fastening base;
positioning the parabolic reflector on the upper half shell;
positioning a mounting for an igniter and a thermocouple on the upper half shell; and
securing the parabolic reflector and the mounting.

120. (withdrawn) A process for fabricating a burner comprising an upper half shell, a lower half shell, a venturi tube for supplying a gas/air mixture to the burner, a pilot burner, and

a parabolic reflector, and wherein the longitudinal axis of the venturi tube coincides with the longitudinal axis of the burner, the process comprising the steps of:

- forming the upper and a lower half shells by cutting a metal sheet and by bending, drawing and trimming its edges;

- crimping the two half shells to form the burner body while forming the pilot burner, in such a manner as to form a tubular burner body that is truncated at both ends, one truncated end having an extension;

- tightly locking a flame arc forming head member at one truncated end of the burner body by clutching and mechanical compression deformation;

- tightly locking a joint at the opposite truncated end of the burner body by clutching and mechanical compression deformation;

- forming gas/air mixture outlet holes on the two half shells;

- welding parabolic reflector fastening bolts on the upper half shell;

- deforming the extension of the truncated end to create a burner fastening base;

- positioning the parabolic reflector on the upper half shell;

- positioning a mounting for an igniter and a thermocouple on the upper half shell; and

- securing the parabolic reflector and the mounting.

121. (withdrawn) A process for fabricating a burner comprising an upper half shell, a lower half shell, a venturi tube for supplying a gas/air mixture to the burner, a pilot burner, and a parabolic reflector, and wherein the longitudinal axis of the venturi tube coincides with the longitudinal axis of the burner, the process comprising the steps of:

- forming the upper and a lower half shells by cutting a metal sheet and by bending, drawing and trimming its edges;

- crimping the two half shells to form the burner body while forming the pilot burner and a flame arc forming head terminal at one end, and forming a truncated profile at the opposite end, the truncated profile having an extension;

- tightly locking joint at the truncated end opposite to the flame arc forming head by clutching and mechanical compression deformation;

- forming gas/air mixture outlet holes on the two half shells;

- welding the parabolic reflector fastening bolts on the upper half shell;

- deforming the extension of the truncated end to create a burner fastening base;

- positioning the parabolic reflector on the upper half shell;

positioning the mounting for the igniter and the thermocouple on the upper half shell;
securing the parabolic reflector and the mounting.

122. (withdrawn) A process for fabricating a burner comprising an upper half shell, a lower half shell, a venturi tube for supplying a gas/air mixture to the burner, a pilot burner, and a parabolic reflector, and wherein the longitudinal axis of the venturi tube is not coincident with the longitudinal axis of the burner, the process comprising the steps of:

forming an upper and a lower half shells by cutting a metal sheet and by bending,
drawing and trimming its edges;

making a hole at an end of the lower half shell;

fitting the lower half shell onto the-venturi tube by inserting one end of the venturi tube in the hole and by pressing the end of the venturi tube around the edge of the hole;

crimping the two half shells to form the burner body while forming the pilot burner, in such a manner as to form a tubular burner body that is truncated at both ends and that has a member closing at least one end, wherein the closing member is a flame arc forming head or a separate closing member, the closing member being tightly fitted on the at least one end, and wherein at least one truncated end has an extension;

forming gas/air mixture outlet holes on the two half shells;

welding parabolic reflector fastening bolts on the upper half shell;

deforming the extension of the truncated end to create a burner fastening base;

positioning the parabolic reflector on the upper half shell;

positioning a mounting for an igniter and a thermocouple on the upper half shell; and

securing the parabolic reflector and the mounting.

123. (withdrawn) A process for fabricating a burner comprising an upper half shell, a lower half shell, a venturi tube for supplying a gas/air mixture to the burner, a pilot burner, and a parabolic reflector, and wherein the longitudinal axis of the venturi tube coincides with the longitudinal axis of the burner, the process comprising the steps of:

making an upper half shell having an integrated half shell at one of its ends to form a half part of the venturi tube, and a lower half shell having an integrated half shell at one of its ends to form the other half part of the venturi tube, by cutting a metal sheet and bending, drawing and trimming its edges;

crimping the two half shells to form the burner body while forming the pilot burner and the venturi tube;

forming gas/air mixture outlet holes on the two half shells;

sealing the tubular body end opposite to the venturi tube by pressing together the two half shells along a predetermined end section and creating a truncated end having an extension;

welding parabolic reflector fastening bolts on the upper half shell;

deforming the extension of the truncated end to create a burner fastening base;

positioning the parabolic reflector on the upper half shell;

positioning a mounting for an igniter and a thermocouple on the upper half shell; and

securing the parabolic reflector and the mounting.

124. (withdrawn) The process as claimed in claim 123, wherein the venturi tube is not integrated with the burner,
wherein the burner comprises a tubular body truncated at both ends, and
wherein the venturi tube is secured to one end of the tubular body by clutching and tight fitting the tubular body directly at the end of the venturi.

125. (new) The process as claim in claim 124, further comprising a junction element tightly fitted between the tubular body and the venturi tube.

126. (New) A burner comprising:
a tubular body comprising a first half shell and a second half shell coupled one to one other; and
a venturi tube coupled to a first end of the tubular body,
wherein the first and the second half shells each comprise a substantially flat central portion extending longitudinally and first and second lateral portions extending angularly therefrom, the first and the second half shells being coupled to one another by coupling the first and the second lateral portions to one another,
wherein a plurality of longitudinal depressions project inwardly from the flat central portions of the first and the second shells to direct an air and gas mixture within the tubular body along longitudinal channels defined by the inward projecting longitudinal depressions, and

wherein the first half shell comprises a plurality of opening rows extending longitudinally to enable the air and gas mixture to egress the openings in the rows to feed a flame, one of the opening rows comprising a plurality of openings having a smaller size than the openings in the other opening rows such to provide a pilot burner.

127. (new) The burner as claimed in claim 126, further comprising a flame arc forming head coupled to a second end of the tubular body,

wherein the flame arc forming head comprises a lateral flange substantially having a same profile as a profile of the coupled first and the second lateral portions, such to provide substantial profile continuity between the lateral flange and a profile or a coupling area between the first and second lateral portions, and

wherein the venturi tube is integral with the first and the second half shells and is provided by a corrugated portion of the first shell and a corrugated portion of the second shell coupled to one another.

128. (new) The burner as claimed in claim 127, further comprising a tubular sleeve slidable over an opening in the venturi tube, the opening in the venturi tube providing ingress of air or gas into the venturi tube, a sliding movement of the tubular sleeve controlling the ingress of the air or gas into the venturi tube.

129. (new) The burner as claimed in claim 127, wherein the flame arc forming head comprises an inner arched wall member directing the air and gas mixture to pilot burner openings disposed in a wall of the flame arc forming head, and wherein the pilot burner openings face the lateral flange at a distance therefrom.

130. (new) The burner as claimed in claim 129, further comprising a duct extending outwardly from the flame arc forming head.

131. (new) The burner as claimed in claim 130, wherein the duct has a U-shaped profile.

132 (new) The burner as claimed in claim 130, wherein at least a portion of the flame arc forming head is force fit within the second end of the tubular body.

133. (new) The burner as claimed in claim 132, wherein the flame arc forming head is further secured to the second end of the tubular body by coupling an end of a bushing projecting inwardly within the flame arc forming head with a boss protruding inwardly from the first or the second half shell.

134. (new) The burner as claimed in claim 132, further comprising one or more tabs extending from the first or the second forming head, the one or more tabs preventing a longitudinal movement of the flame arc forming head.

135. (new) The burner as claimed in claim 126,
wherein the first and the second lateral portions of the first and the second half shells each comprise a flange extending therefrom,
wherein the flanges extending from the lateral portions of the second half shell are wider than the flanges extending from the lateral portions of the first half shell,
wherein the first and the second lateral portions are coupled by laterally juxtaposing the flanges of the first and second half shells and by wrapping a portion of the flanges of the second half shell over the flanges of the first half shell to form a tight seal,
wherein the mated flanges provide a U-shaped profile defined by a wall of the tubular body and the mated flanges, and
wherein the openings having the smaller size are disposed within the U-shaped profile.

136. (new) The burner as claimed in claim 126, wherein the second half shell extends longitudinally beyond the first half shell to provide an extension from the tubular body configured for connecting the tubular body to a supporting structure.

137. (new) The burner as claimed in claim 136, wherein the extension comprises one or more stiffened edges.

138. (new) The burner as claimed in claim 137, wherein the stiffened edges are formed by rolling over lateral portions of the extension.

139. (new) The burner as claimed in claim 137, wherein the extension has a Z profile comprising two end portions substantially parallel to a longitudinal axis of the tubular body and a lateral portion therebetween.

140. (new) The burner as claimed in claim 126, wherein the opening rows comprise two upper opening rows having a larger size and a lower opening row having the smaller size.

141. (new) The burner as claimed in claim 126, wherein the longitudinal depressions impressed in the first shell are essentially V-shaped.

142. (new) The burner as claimed in claim 126, wherein the apices of a first longitudinal depression in the first shell and of a second longitudinal depression in the second shell are longitudinally aligned.

143. (new) The burner as claimed in claim 126, wherein the longitudinal depressions in the first and the second shells extend substantially parallel to a longitudinal axis along a portion of the tubular body and converge inwardly to form a funnel shape in the proximity of the venturi tube.

144. (new) The burner as claimed in claim 126, further comprising a parabolic reflector coupled to the first or second half shell.

145. (new) The burner of claim 144, wherein the parabolic reflector comprises a central portion coupled to the first or the second half shell, symmetrical lateral extensions protruding outwardly, and connecting portions extending upwardly and coupling the central portion to the symmetrical lateral extensions.

146. (new) The burner as claimed in claim 144, wherein the parabolic reflector is removably coupled to the first or the second half shell.

147. (new) The burner as claimed in claim 126, further comprising an igniter and a thermocouple coupled to the tubular body.

148. (new) The burner as claimed in claim 147, wherein the igniter and the thermocouple are removably coupled to the tubular body in the proximity of the venturi tube.

149. (new) The burner as claimed in claim 147, wherein the igniter and the thermocouple are disposed angularly in relation to the flow of the air and gas mixture within the tubular body.

150. (new) The burner as claimed in claim 149, wherein the igniter and the thermocouple are disposed at about 135 degrees in relation to the flow of the air and gas mixture within the tubular body.